

✓ NOTE: This is the abstract for Both

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TI Electrically conductive coating for microcapillary composite matrices, and
their formation
IN Schwarz, Wolfgang
PA Austria
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	AT 9800403	A	19990915	AT 1998-403	19980309
	CA 2322395	AA	19990916	CA 1999-2322395	19990308
	AU 9928175	A1	19990927	AU 1999-28175	19990308
	AU 748492	B2	20020606		
	EP 1068164	A2	20010117	EP 1999-908656	19990308
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	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, SI, LT, LV, FI				
	JP 2002505996	T2	20020226	JP 2000-535601	19990308
	AT 9909129	A	20020915	AT 1999-9129	19990308
	AT 410440	B	20030425		
	AT 224860	E	20021015	AT 1999-908656	19990308
	NO 2000004473	A	20001030	NO 2000-4473	20000907
PRAI	AT 1998-403	A	19980309		
	WO 1999-AT56	W	19990308		

AB The matrixes are produced by depositing on mortar or concrete a paint or coating material contg. .gtoreq.1 of (1) aluminosilicates having general formula $aM2O.bAl2O3.cSiO2$ (c/b ratio 1-40, preferably 5-20; a/b ratio 1-25, preferably 5-15; M = Li, Na, K), (2) an aluminohydroxo complexes having general formula $MxAl(OH)y$ (x = 1-3; y = 4-6; M = Na, K), and (3) Al phosphates, preferably condensed Al phosphates, in combination with addnl. aluminosilicates and water-dispersible org. polymers, to give microcapillary composite matrixes having sp. elec. resistance (measured at the surface) <25, preferably <5 .OMEGA..bul.cm. An elec. conductive paint or coating material, preferably elec. conductive pigments and/or fibers, is applied to the matrix, e.g., concrete or mortar. The paint or coating material may contain reactive aluminosilicates, preferably metakaolin, SiO_2 fume, SiO_2 sol, and dispersing agents, thickeners, water-retaining agents, film formers, fillers, and fibrous materials. The coating is resistant to acids and chloride, and extends the service life of porous mineral structures. An elec. conductive coating was prep'd. from (as component A) K silicate soln. (SiO_2 31.5, K2O 14.8%) 59, 50% aq. dispersion of carboxylated butadiene-styrene copolymer 208, Bu glycol ether 2.25, graphite powder 180, and deionized water 80, and (as component B) $Nax[Al(OH)_{3+x}]$ soln. (Al_2O_3 38.6, Na_2O 54.5%) 5.3 wt. parts. The coating was applied to 1-yr-old mortar in 2 layers to thickness .apprx.300 .mu.m,

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Corrosion
resistant

and had sp. elec. resistance 0.42 .OMEGA. bul. cm.